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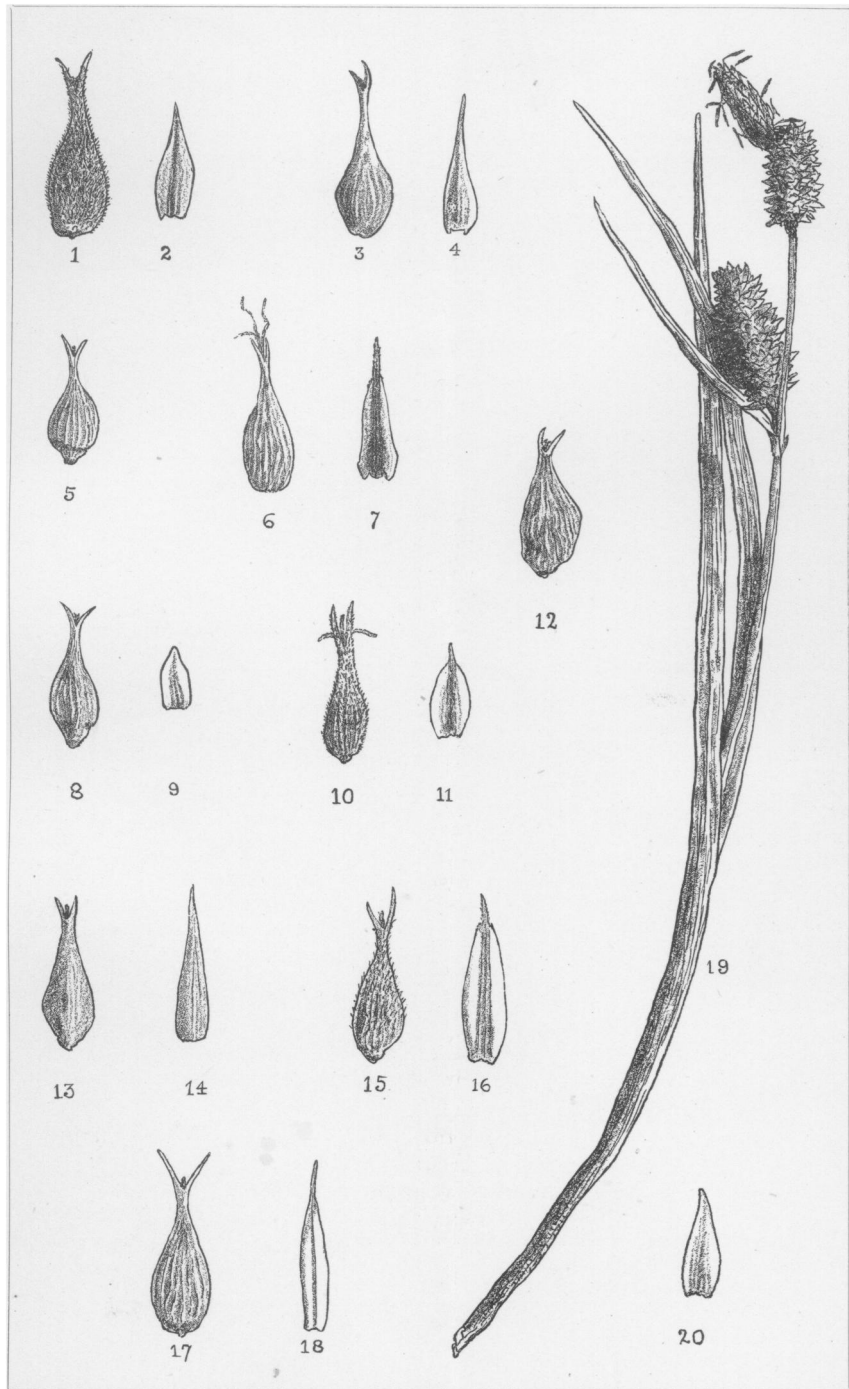
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BAILEY ON CAREX.

BOTANICAL GAZETTE.

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Notes on *Carex* —V.

BY L. H. BAILEY, JR.

1. To sustain the disposition which I made in the June GAZETTE of *CC. trichocarpa*, *aristata*, and *leviconica*, I submit drawings of perigynia and pistillate scales from various specimens in my collection. I have little confidence in the pubescence of the perigynium as a specific character. It is generally very variable in different individuals of a species, and, in some cases, *e. g.*, *CC. triceps* and *cinnamomea*, it disappears with age. In *CC. trichocarpa* and *aristata* it is entirely inconstant. Nevertheless, in the perigynium are to be found the most constant characters to separate these plants. Typical variety *aristata* differs from typical *C. trichocarpa*, as follows: Culm stouter; sheaths hairy; staminate scales awl-pointed and lax; pistillate spikes heavier; pistillate scales awl-pointed, narrow at base, equaling or exceeding the perigynium; perigynia smooth, somewhat coriaceous, rather narrow and abrupt at the base, long and gradually beaked, teeth setaceous and spreading. The size of the plants is wholly unreliable as a specific character; the hairiness or smoothness of leaf-sheaths is by no means constant; there are very numerous and complete gradations from the one to the other in shape and disposition of staminate scales. There is every gradation in size of spikes. The perigynia present the only characters worth especial consideration. I have in my possession every gradation of size, shape, texture and hairiness of perigynia from one extreme to the other. *C. trichocarpa* should have hairy perigynia and smooth sheaths, while *aristata* should have smooth perigynia and hairy sheaths. I often find specimens with both perigynia and sheaths smooth, and conversely, specimens sometimes occur with both perigynia and sheaths hairy.

The figures illustrate a few of the variations of the perigynia and pistillate scales. Fig. 1 represents a perigynium, and Fig. 2,

a scale of typical *C. trichocarpa* from Illinois. The perigynium is very broad, short-beaked, and densely setose-hairy. Fig. 3 shows *C. trichocarpa* with only a trace of hairiness and the long scales (Fig. 4) approach var. *aristata*. The shape and appearance of the perigynium is decidedly like var. *aristata*. This plant is robust, and has much more the appearance of the variety than of the species. It might with equal propriety be referred to either. The sheaths are smooth, or nearly so. The specimen figured is from Nebraska, but a similar form is common here at Lansing. Fig. 5 is the typical var. *imberbis* from Illinois. It has the scale of *C. trichocarpa* and the perigynium also, with the exception of the smoothness; sheaths scabrous. Fig. 6 is also var. *imberbis* from Illinois. Both perigynium and scale (Fig. 7) are nearer var. *aristata* than the species. Fig. 8, from Michigan, is nearly like the last only that the sheaths of the plant are hairy. This hairiness throws it into *aristata*, but the scale is nearly that of *C. trichocarpa*. Fig. 10 represents Dewey's old var. *turbinata* from New York. If the sheaths were hairy it would make a better *aristata*. Fig. 12 pictures C. A. Meyer's *C. orthostachya* from Russia. The smooth perigynium and hairy sheaths throw it into var. *aristata*, but the form of the perigynium is nearer the species. Fig. 13 is the var. *Deweyi* (*C. leviconica*, Dew.), which is smooth throughout. This variety is distinguished from both *C. trichocarpa* and var. *aristata* by its hard, polished, and almost nerveless perigynium, and by general habit. It passes by all gradations into both the species and the variety, however. Fig. 15 is from a plant of *aristata* with the typical robust habit, hairy sheaths, long spikes (4 in. long!), very loose and long staminate scales and awl-toothed perigynia, but the perigynia are hairy. This specimen is from Oregon. Fig. 17 represents pretty good *aristata*, but the whole plant is smooth!

2. *CAREX COMPACTA* R. Br., Sill. Journ., 1835, p. 39. Prof. John Macoun sends me this interesting arctic species from Nottingham Island, Hudson's Straits. (Fig. 19.) The species is closely allied to *C. saxatilis* L., but differs in habit and especially in the *closely packed, conspicuously squarrose and much inflated perigynia*. From a study of authentic specimens in Herb. Gray, I am prepared to say that this species and *C. membranacea* Hook., are the same. My friend, Arthur Bennett, of Croyden, Eng., sends this note:

"*C. compacta* R. Br., is

C. hymenocarpa Drej.

C. membranacea Hook.

C. ampullacea var. *borealis* Lange.

Fide Herb. Hooker and Boott at Kew."

Carex compacta inhabits arctic America, and it is apparently rare.

EXPLANATION OF PLATE VIII.—1-18, *C. trichocarpa* and vars. 19, 20, *C. compacta*. 1, Perigynium of typical form, Illinois. 2, Pistillate scale of same. 3, With smooth perigynium and long scale. 4, 5, Perigynium of typical var. *imberbis*, Illinois. 6, Same of var. *imberbis* approaching var. *aristata*. 7, Scale of same. 8, Perigynium of var. *imberbis*, Michigan. 9, Scale of same. 10, Perigynium of var. *turbinata*, New York. 11, Scale of same. 12, "*C. orthostachya*" (C. A. Meyer), Russia. 13, Perigynium of var. *Deweyi*. 14, Scale of same. 15, Hairy perigynium of var. *aristata*, Oregon. 16, Scale of same. 17, Perigynium of smooth var. *aristata*. 18, Scale of same. 19, Entire plant of *C. compacta*. 20, Pistillate scale of same.

An Autobiography and Some Reminiscences of the Late August Fendler. III.

EDITED BY WM. M. CANBY.

His old habit of meteorological observation was kept up with unfailing regularity. He writes: "The evenings, mornings and nights are delightfully cool—the thermometer standing at 73°–80°, and generally clear. The heat of the day attains its maximum at noon, when the mercury usually rises to 94° or 96°. We make five thermometric observations every day at 5:30 and 7 A. M., 12 M. and 2 and 8:30 P. M." This industry and exactness, traits of character so unusual among the population of Trinidad, combined with the daily drying in the sun of botanical papers, an occupation which, as many botanists know, excites the wonder and amusement of people claiming a more enlightened civilization, soon rendered the brothers liable to a suspicion that they were engaged in counterfeiting or some other illisit business. In consequence their house was taken possession of and searched by the not over-gentle police, who even dug over their garden. It was a severe trial to the scrupulously honest man. "That this little affair weighed heavily upon my mind and gnawed deep into my immoderately sensitive feelings, you may well imagine," he wrote soon after. After some time he again wrote: "Not minding more than I can help the people around me, I go on improving my little property, setting out lots of Yams, Tanias and Bananas, and putting in cuttings of different ornamental shrubs and roses, also a weeping willow; raising from seeds *Rondeletia*, *Coxcomb*, *Zinnias*, *Pinks*, *Petunias*, etc., etc., to remind me of my former more northern home."

The promiscuous population of Trinidad afforded Fendler much interest and amusement. He contrasted the large Coolie population with the New Mexican Indians he had formerly known, finding many points of resemblance in character and habits. Among the latter he notes particularly the well known one of taking a whiff or two from a pipe and passing it on from one to another. But to one so honorable there was much also to cause pain. A short extract will throw some light on his habit of thought. "The observer of mankind finds in this Island much to interest him, but to me it is a source of pain to see the dense swarms of humanity full of tricks and deception * * * * with indecent haste trying to cheat and undermine each other. It is only when getting among 'the high woods,' in places where the single individual finds him-